

DESIGN OF A STRATEGIC TRANSIT MARKET RESEARCH
PROGRAM

Prepared for the
REGIONAL TRANSPORTATION AUTHORITY
One North Dearborn Street
Chicago, Illinois

By

Frank S. Koppelman
Allan Schnaiberg
Joseph L. Schofer
Northwestern University
Evanston, Illinois

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Illinois Universities Transportation
Research Consortium

1033 West Van Buren Street, Suite 700 South, Chicago, Illinois 60607-9940

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EXECUTIVE SUMMARY DESIGN OF A REGIONAL TRANSIT MARKET RESEARCH PROGRAM

To assure the future viability and effectiveness of the transit system in northeastern Illinois, the Regional Transportation Authority needs to identify and anticipate major market trends, and to understand the markets for transit and how they will respond to various existing and proposed service offerings. This report recommends that the RTA establish a strategic market research program to provide such decision-support information on an ongoing basis.

A conceptual model of the factors affecting the structure and evolution of travel markets is presented. Those factors include macroeconomic trends, regional geography, transportation service characteristics, and attributes of households and individuals. The dynamic nature of these influencing factors leads to continuing changes in travel markets, and thus to shifts in demand for transit services. These dynamics are illustrated with examples of recent changes in Chicago area transit markets.

Management market information needs of the RTA are described, focusing on the mandate of the RTA to make strategic, region-wide, long-term choices about allocation and reallocation of resources, oversight of the provision of services, division of service responsibilities, and finance. The importance of early trend

identification, understanding principal causal factors underlying trends, and the development of a practical and responsive predictive capability are underscored.

A design for a strategic market research program is presented, including four major steps:

- *Ongoing monitoring* of trends in demand, supply, level of service, as well as population, the regional economy, the social geography, and household and individual characteristics.
- *Behavioral studies* of specific issues, problems and opportunities to understand causal forces in the market and identify promising transit service changes.
- *Field testing and evaluation* of new concepts of service and pricing, ride-sharing incentives, and mechanisms for encouraging transit-supportive development.
- *Implementation* of proven transit actions to improve service and increase ridership.

This process is designed to be ongoing, cyclical, and focused on providing information for supporting strategic decision-making by the RTA.

Initial steps necessary for implementing a strategic market research program are identified, including assignment of management and staff responsibilities, establishment of a steering committee involving service board representatives, and funding commitments.

This report argues that an effective strategic market research program can serve as a core activity of the RTA strategic planning process, providing information about market characteristics and expected responses to changes which can serve to support and improve RTA strategic decisions.

1. INTRODUCTION, OBJECTIVES AND SCOPE

The transportation system in the Chicago Metropolitan area has played a key role in the historical development of the region, its activities and economy. The heart of that system is mass transportation, which functions through a variety of modes and managing agencies. Today, the public transit services in Chicago are strong and essential to the economic vitality and social structure of the area.

Surely one of the keys to the effectiveness of Chicago's transit system, both today and in the future, is an institutional structure with the will and authority to make the hard choices necessary to maintain and enhance that system. Such a structure has been put into place over the past fifteen years, after Chicago's transit system was allowed to decay through an ongoing series of financial crises.

After a period in the 1960s and 70s, during which time budgetary shortfalls forced service cut backs and precipitous price increases, the state legislature established the Regional Transportation Authority (RTA) to set policy and oversee the functioning of the transit system. Ultimately, the RTA was given a reliable source of revenues, from sales taxes as well as state and local contributions, which could be used for operating subsidies and, to a lesser extent, capital investments.

To assure that revenues would be wisely spent, the RTA was also given substantial powers to review and approve the operating budgets of the three public transit providers in the region, the Chicago Transit Authority, Metra (commuter rail services), and Pace (suburban bus services).

RTA's mandate is to maintain a long-term, regionally-focused outlook in its management. It is required not only to manage resources on an annual basis, but also to look ahead at least five years in its budget planning cycle. To provide a sound basis for such long-term decision making, the RTA initiated a strategic planning effort in the mid-1980s which broadly explored future service and capital investment needs and opportunities, and evaluated resource expectations.¹ That strategic planning effort continues to serve as the cornerstone of RTA's decision making processes.

Trends in the markets for transportation and transit services must be a major concern for managers at RTA and the three service boards. Transit providers must certainly respond to markets, but to the extent possible they should be able to anticipate market dynamics to support long-term resource allocation decisions. In some cases, a strong understanding of factors affecting the transit market may provide a basis for influencing the market trends themselves.

To that end, the three service boards have engaged in a variety of empirical

¹The policy document resulting from this process is: *Strategic Plan of the Regional Transportation Authority*, March, 1988.

market research studies over the past five years. In each case, the service boards conducted studies of their own markets, both to develop a general understanding as well as to investigate and solve specific, short-term operating problems.^{2 3 4}

Such focused, special-purpose market studies are critically important to the near-term success of the service boards, and thus of the RTA as well. They should continue and become routine management activities. At the same time, we perceive a gap in market studies at the level of the RTA, which has a different mandate than the service boards.

While RTA can benefit from focused, service board market research activities, its board and managers must look further ahead, seeing the region as a whole, and balancing resource allocations across the entire area and its many markets. RTA, for example, may face the need to cut back services in one market in favor of more productive investments in others. It needs the informational base to make choices among the service boards, between modes, and across markets.

²James F. Foerster; *Pace User Survey, Prepared for the Suburban Bus Division of the Regional Transportation Authority by the School of Urban Planning and Policy, University of Illinois at Chicago, July, 1986.*

³Midwest System Sciences, Inc., *Market Analysis for Chicago Suburb to Central Area Commuters*, prepared for the Northeastern Illinois Rail Corporation (Metra) under subcontract to Market Opinion Research, October, 1985.

⁴Midwest System Sciences, Inc., with Market Opinion Research, *Analysis and Interpretation of Factors Affecting CTA Ridership* prepared for the Chicago Transit Authority, October, 1988.

Perhaps most important, RTA needs to develop a clear view of potential future trends in markets to make major investment decisions today and plan for the financial and structural future of our transportation system tomorrow. These information needs can be met, in part, through a new kind of market research conducted by and for the RTA. That market research must look far ahead and it must encompass the region as a whole. Market research for the RTA must explore emerging trends in the market place, and it must seek to understand the causal forces behind those trends to develop a basis for forecasting. Just as RTA has been successful at founding its decision making on strategic planning, it needs to establish, at the core of its ongoing strategic planning effort, a process of strategic market research.

This study was conducted to support that need, and to offer RTA policy makers specific guidance about the kind of market research program which RTA should establish.

The objectives of this research are:

- To characterize the need for long-term, ongoing, regionally-focused transit market research in the Chicago metropolitan area;
- To define and develop the concept of strategic transit market research;
- To distinguish strategic market research from more conventional market research;

- To identify the role of RTA in strategic transit market research;
- To support the need for, and value of, RTA engaging in strategic market research.

In the next section of this report we present a conceptual model of the transit market to illustrate market dynamics and underscore the need for strategic market research. Section 3 discusses the role of the RTA in responding to, and preparing for, long-term shifts in the transit market. This section also presents definitions of marketing, market research, and strategic market research.

Section 4 identifies what RTA needs to know to respond to market dynamics strategically. This is followed in Section 5 with a specific design for a strategic market research program, including tasks and promising methods. An outline of an implementation strategy is presented in Section 6.

2. MARKET DYNAMICS

A. Introduction

The market for transportation services, and for public transit in particular, is both complex and changing. Since much of this market change is generated by forces outside the control of transportation agencies, this requires the transit system itself to adapt to these exogenous market trends. To manage the transit system and its evolution, to expand, contract, or reallocate services and resources, requires

continuous monitoring, assessment and projection of regional market patterns of demand.

Adapting the transit system to changing market trends requires ongoing organizational efforts to assess and predict market changes. *Assessment* takes place after such market changes have occurred, which means that transit services are typically misallocated while such markets undergo changes (thereby leading to underutilization or crowding). *Predicting* future market changes permits restructuring of services in advance to reduce such misallocation.

While prediction is thus preferable to post-hoc assessment for rational management in the face of market dynamics, it is a substantially more difficult task. We need to establish relationships between causal forces and market trends, to measure the exogenous factors that influence market dynamics, to make some assessments of their trends, and then make informed projections of their likely future trajectories.

To the extent that these forces create new opportunities and/or constraints for transit systems, we then need to assess alternative transit agency responses to these dynamics. These responses can range from transit service changes to action-oriented negotiations with various social, political, and economic actors to encourage them to modify some transit market factors, and in some cases, to direct governmental intervention in the market.

Thus, there is a clear need to establish a continuing process that will trace, analyze, and predict the dynamics of transportation markets, and to evaluate alternative transit system responses to such changes. Only such a program will ensure that responsive transit services will be available in the future, and that political constituencies will view the transit system itself as responsive to changing markets.

The process we envision for fulfilling this need is strategic transit market research. We conceive of market research broadly, to encompass measurement, prediction, testing of alternative actions, and support for decision making.

To establish a strong basis for designing such a process, it is important to develop a clear and comprehensive perspective on market dynamics and the principal forces which drive them. This perspective is presented in the next section of this report.

B. Principle Causal Forces Affecting Transit Markets

The forces which determine the size and nature of transit markets may be separated into macrostructural and microstructural factors. Macrostructural forces originate and operate at global, national, and regional scales, while microstructural forces are best understood at the level of the household and individual traveler.

A conceptualization of the inter-relationships among these factors, and their influence on demand for travel and choice of travel mode, is shown in Figure 1. This conceptual model is discussed in the following sections of this report.

1. Macrostructural Factors

The macroeconomy, including global, national, and regional factors such as the supply and price of energy, the relative value of the dollar, the cost of money, and competitive economic forces influence employment, income, and population in the Chicago region. Employment, resources, and population have fundamental impacts on travel demand, since they determine both the primary reasons for travel as well as the ability to travel in certain ways.

Changes in these factors produce shifts in market demand, to which the transit system must respond, but which it cannot directly control. Furthermore, the macroeconomy, because of its impact on resource availability, has a rather direct influence on the level of transportation service which can be provided.

The macroeconomy, over the long run, influences the geography of the region through its effects on the demand for products and activities. Economic pressures may cause the region to change spatially or in terms of density. The outcome of this process will determine, in part, both the demand for travel and the feasibility of carrying that travel on various elements of the transportation system.

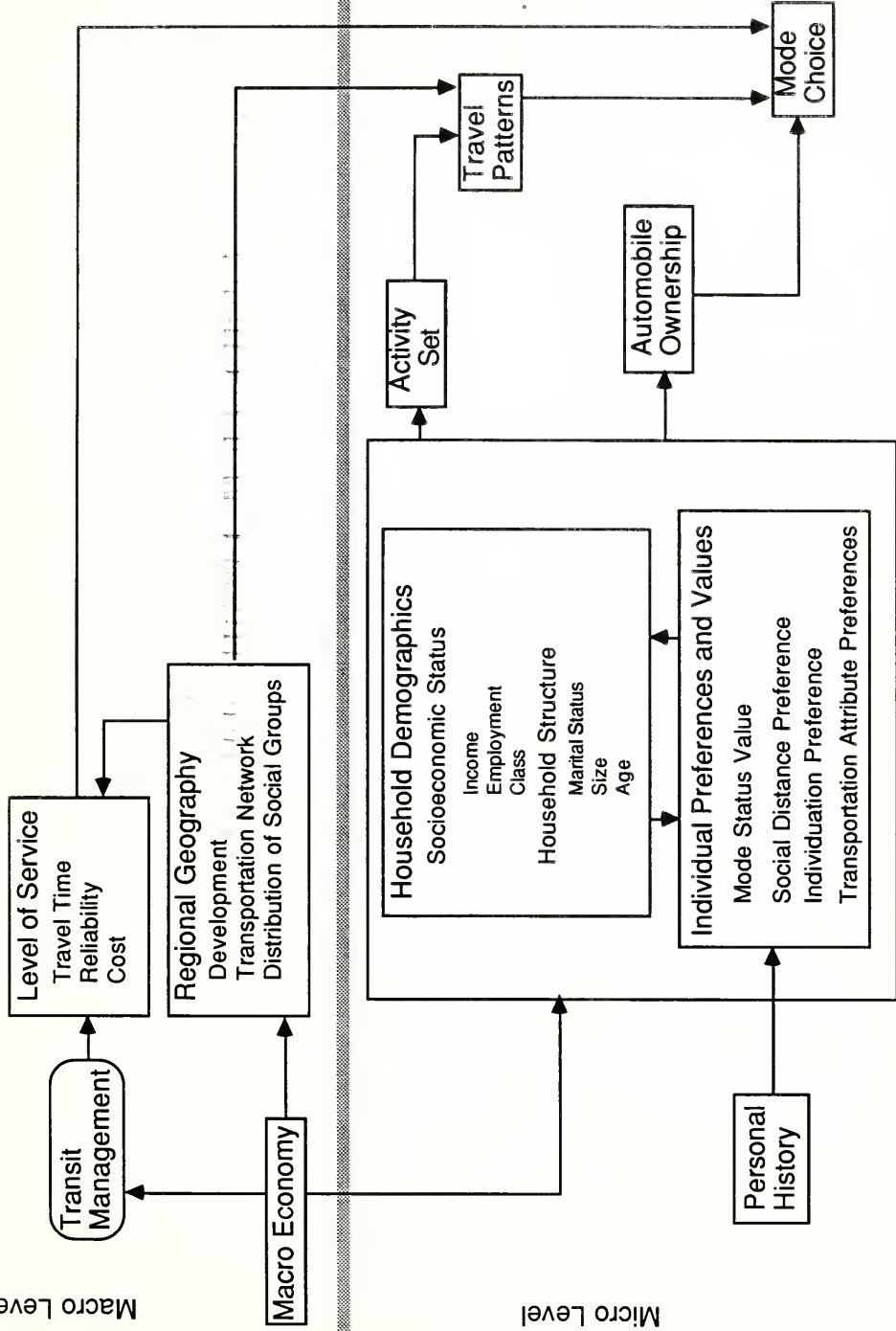


Figure 1

FACTORS AFFECTING TRAVEL MODE CHOICE

Key dynamic elements of the regional geography of importance to strategic transit management are the spatial patterns of development, the transportation network, and the distribution of social groups.

Development, the changing pattern of facilities (offices, factories, stores, and housing) in the region, is determined by market demand, site-specific costs and supporting systems and services (transportation, water, sewers, etc.), regulations, and developers' preferences for risks and returns. While the development process is largely privately controlled, there are opportunities to influence it through public policy, by regulation, selective provision of public services, and negotiation.

The development process is obviously critically important in determining both the spatial arrangement and economic and social attributes of the travel market. Thus, an essential role for strategic transit market research will be to identify and analyze factors and trends in regional development, as well as to explore ways to influence development for the purpose of ensuring the viability of transit investments, present and future.

The structure of the *transportation network* is a fundamental determinant of the level of transportation service provided, and thus it has a direct influence on travel demand and mode choice. Network structure also affects the development pattern and the way people choose to distribute themselves and their activities in the region.

The travel patterns and the travel problems we experience today are a reflection of historical evolution of the transportation network. Expectations and commitments with respect to future network structure are affecting spatial location decisions today, which will influence travel demand in the future.

Of course, the causal forces work in both directions, since the policy process typically directs the evolution of the transportation network to follow development patterns and thus to meet evolving travel needs.

The spatial *distribution of social groups* is another element of regional geography, one which is too often overlooked but which has a major impact on travel patterns and the demand for public transportation. *Who* lives, works and shops where will determine service needs and preferences, in turn influencing the viability of various transit services.

Strategic transit market research must include efforts to understand changing arrangements of social groups, and ways to respond to, and perhaps to influence, these trends. For example, the need for reverse commuting services, and the heavy reliance on, and apparently preference for, automobile travel in the far suburbs, are to a significant degree results of the evolution of particular spatial patterns of social groups.

The social geography in the region is in part determined by the distribution of resources among social groups and the spatial patterns of costs, and public and private resources. It is also influenced by public policy and its implementation and

the social preferences of various groups in terms of their willingness to mix with other groups.

It is well-established that the *level of service* provided by transportation systems affects the demand for travel and the choice of mode. Service level has many components, and strategic transit market research is needed to understand the relative importance of these components across different social groups.

Recent tactical market studies have suggested that travelers are particularly sensitive to basic elements of service quality, such as travel time, reliability and flexibility. Many travelers, including those with fewer resources, seem willing to pay more money for measurably better service. Such market research has commonly uncovered traveler preference patterns which are different than those reflected in transit operations planning.

To capture the relationship between level of service and market reactions, comprehensive data on level of service, including a variety of true quality measures, are required. The availability of such data for Chicago transit varies across the service boards; much of what is collected is supportive of operations management but does not provide a user's perspective on service quality. Strategic market studies, by tracking objective service measures, perceptions of service quality, and ridership trends, can help us understand the role of service quality and, in the long run, may identify trends in service preferences which may provide the basis for keeping service tuned to market needs.

The macroeconomic forces noted above impact substantially upon the distribution of socioeconomic groups within the region, which in turn affects demand for transit. Both the numbers and location of various social groups in the region are dynamic, leading to substantial potential for changing demand for different transportation modes within the same geographic setting. This poses new challenges for transit systems, particularly when their past investments are relatively fixed geographically, while the transit demand distribution is free to shift across geographic areas.

2. Microstructural Forces

Many forces are operating at the level of the household and the individuals within it that affect the demand for transportation and public transit. Transportation management and planning functions often overlook these forces, treating them as "noise" in the market process. Yet such forces are real, important, changing, and at the same time understandable and thus amenable to market research.

At the level of the *household*, socioeconomic status (e.g., income and employment) is both important in determining travel demand and is constantly changing. Demand shifts can arise from income and employment changes occurring to a given subpopulation in an area, and changes can occur in the distribution of social classes across areas. As a result, market shifts may occur

across the entire region, or may occur as redistributions of demand, as socioeconomic status changes produce alterations in activity sets, travel patterns, and auto ownership.

The mix of occupants of dwelling units served by transit is also dynamic, in part reflecting macroeconomic and other forces. Shifts in marital structure, age distribution, and size of households has an effect on demand for transit, because of the changes in activity sets, travel patterns, and auto ownership of households.

Factors such as divorce, return of young adult children, and cohabitation alter household dynamics and individual roles, and hence markets for transit. These are both associated with and also partly independent of socioeconomic status changes. And again, they can occur either as changes in existing households in a given area, or as shifts of households across areas.

Characteristics of *individuals* are also important in determining the market for transportation services. We conceptualize these microstructural forces as products of personal histories of individuals, interacting with the macrostructural forces that permit or inhibit expressions of personal preferences and individual values in travel-related behavior. For transit demand predictions, we expect that some part of these personal histories reflects past and/or current experiences with transit, perhaps going back to school bus services in their youth. Other parts of these preference systems reflect subgroup or social class cultural influences. There

are important personality-related factors as well, which may drive the behavior of individuals in their choice of travel mode.

This cluster of preferences and values operates on transit demand by influencing choices of activity sets, travel patterns, and auto ownership.

For example, one perspective for understanding mode choice decisions of individuals recognizes that choices are at least in part influenced by the *status value* which people assign to the competing modes. Reflecting personal and social group experiences in the past, as well as current and cultural influences, this factor affects the degree to which population subgroups believe that transit is appropriate "for people like me", and hence influences their responsiveness to transit service availability or changes. Conversely, they may focus on attributes of other modes of travel to project images of themselves.

In many markets, the automobile does a better job of meeting travelers' mode status value needs. Ongoing, strategic market research may identify ways to adapt transit services, and present them to the public, to produce a more favorable competitive relationship with the automobile.

There is also reason to believe that individuals hold strong preferences for maintaining a certain *social distance* between themselves and others they see as different. While mass transit managers have emphasized numbers of riders as a measure of success, and have strived for efficiency by maximizing the number of passengers on each vehicle, it is clear that some market segments have strong

preferences against associating with other social groups/types, with whose (actual or imputed) traits they may be uncomfortable. Although they often find it socially unacceptable to acknowledge such preferences or aversions publicly, such market segments tend to "vote with their feet" against transit in general or specific transit routes which require them to travel in close proximity with those other groups/types that they prefer to keep at some social distance.

Carried a step further, some individuals clearly exhibit a preference to travel either alone or with close associates. What these individuals prefer is some degree of privacy from groups of travelers, regardless of the attributes of these fellow-travelers. Whether this arises from fears of personal safety or the need to exercise control, the outcome is to diminish the propensity to use any form of group transportation.

Understanding these preferences more clearly could provide both a basis and a justification for exploring more individualized services, or services which cater to particular neighborhoods and trip segments (e.g., express and subscription services). Such an understanding might also guide us away from certain services which are doomed to failure.

Finally, as indicated above, individuals have clear and varying preferences for specific service attributes. Understanding these preferences and their trends is essential for successful, long-term management of transportation system.

The complexity of the transit market is increased by the fact that the behavior of many other entities, beyond individual travelers and their households, can affect trends in travel and transit demand. Political actors, individuals and decision making units, make frequent choices about provision of public services and permission to engage in development, many of which may have the effect of supporting or eroding the market for transit. To encourage such decision makers to help in maintaining the viability of the transit system, it seems important to understand their motivations and perspectives.

Similarly, developers make choices about site locations and designs, in which there is real power to affect transit markets. Employers and business owners can facilitate the use of drive-alone auto or various forms of ride sharing through the services, facilities, and incentives they provide to their workers and customers.

Finally, private carriers can enter and leave certain urban travel markets, and can be forces for good or ill affecting our transit systems.

A strategic market research program must ultimately encompass the effects of all of these forces and entities to develop a sound basis for transit management in the future.

C. Major Market Trends in the Chicago Area

There is ample evidence that a variety of long-term trends are operative in the markets for transportation services in the Chicago region. Because of the

absence of integrated, in-depth market information, we see these primarily from the perspective of market geographies, rather than that of the underlying social and economic dimensions which are important for understanding causality and future prospects.

The market for *travel to the Chicago Central Business District* is particularly important for the CTA (47% of CTA trips begin or end in the CBD)⁵ and Metra. This market continues to grow in absolute terms, but it is becoming a smaller proportion of total regional travel as a result of suburban growth. The absolute and relative CTA share of this market has been declining, in part because of geographic expansion of the Chicago CBD, but surely for socioeconomic and service quality reasons as well. The Metra share is slowly increasing, at least in absolute terms. CBD growth is likely to continue, but the long-term prospects for regaining transit market shares is uncertain.

The *intra-Chicago transit market* share has been declining, having become increasingly auto-oriented. This is a market of interest to the CTA. Most of the riders in this market are transit captives, and gains in auto ownership, as well as declines in the service and image of transit, may be contributing to this shrinkage. The potential for boosting market shares within Chicago may be limited.

⁵Midwest System Sciences, Inc., in collaboration with Market Opinion Research, *Analysis of the Chicago Travel to Central Business District Market*, prepared for the Chicago Transit Authority, July, 1989.

There are pressures leading to expansion of the *reverse commuting market*, that is, work trips from Chicago to suburban job sites. The true dimensions of this market, and the factors influencing mode choice within it, are not known today because of the absence of relevant and timely market studies. This is a market of interest to all three service boards.

Reverse commuting pressures come from rapid suburban job growth, as well as a shortfall in the supply of low and moderate income housing in the suburbs. A key indicator of the potential here is the claim that there are many unfilled entry level jobs in the suburbs. The potential for increasing the market penetration of transit for reverse commuters is described optimistically, but the true prospects are unknown. The cost-effectiveness of transit *vis a vis* other public policy actions which might solve reverse commuting problems has not been tested.

Travel in and around *near-in* ("first ring", older) *suburbs* is important because a substantial population lives in these towns. This market is of interest to CTA (which serves 37 near suburbs), Pace, and to a lesser extent Metra. There has been real employment growth in many of these suburbs in the last decade, and there is ample local transit service in most near suburbs, serving largely captive riders. Yet transit has a limited market share in this setting, where the dispersed trip set makes it costly to offer good service, and auto travel is feasible and attractive for many workers.

The focal point of regional growth today is in the *far suburbs*, which are rapidly gaining population and employment. Travel in and among the far suburbs is dominated by the automobile. These communities are largely functionally independent of Chicago, and so the strong radial connections to the CBD provided by Metra have decreasing relevance to such places.

Far suburbs are highly varied in nature, ranging from old, independent towns experiencing new growth (e.g., Elgin, Aurora), to totally new communities developed at very low densities. This suggests that there are, in fact, a variety of market segments in the far suburbs which warrant better understanding.

Far-suburban development has leaped beyond existing transit services, particularly fixed-guideway services. The historical connection between fringe development and fixed-rail services has been broken; indeed, even the connection to high-capacity highways has become less important, and developers and locators seem to be willing to accept dependence on the ubiquity of auto travel on arterial streets even though there is dissatisfaction with the resultant travel services.

The far-suburban market is increasingly plagued by congestion, which has become a problem not so much because of its intensity, but because it was not heretofore regarded as a suburban issue. Both rapid growth and congestion suggest that there may be opportunities for increasing the role of transit in the far suburbs. Yet the market studies necessary to identify promising action have not been

conducted, and instead much effort and resources go into "favorite" solutions which may not be solutions at all.⁶

The far-suburban market is of particular interest to Pace, but Metra as well has been pursuing plans for non-radial rail services, the market potential for which is highly problematic. Part of the problem, we think, is that the far suburbs have developed in different ways than the central city, populated with people having different socioeconomic attributes, values, preferences, and resources. While we have an arsenal of predictive tools for anticipating traveler response to transportation service changes, those tools come from an earlier era, and are based on aging data; their capability to support predictions of the response of far-suburban travelers to new transit services may be severely limited.⁷

These are aggregate trends; our understanding of what underlies them, and thus where these trends may take us in the next decade, is painfully limited. Faced with the responsibility to allocate scarce resources to respond to, anticipate, and perhaps influence these trends, RTA has a real need to develop an in-depth understanding of all of the markets it faces.

⁶some aggregate analyses of major trends affecting suburban travel may be found in: P. Prevedouros and J. Schofer, "Changing Transport Behavior as a Factor in Suburban Congestion," presented to the Transportation Research Board, January, 1989.

⁷We are currently engaged in a small-scale empirical study of the effects of social factors in suburban travel, under the sponsorship of the Illinois Department of Transportation.

3. ROLE OF THE RTA IN RESPONSE TO MARKET TRENDS AND FORCES

A. The Stakes for RTA in Market Assessment

We believe there are some direct and indirect stakes for RTA related to its pursuit of market monitoring, prediction, and adaptative reallocation of services, either reactively or proactively. The motivations for RTA to respond actively to these issues include the following outcomes of successful market research:

- increased ridership [service utilization], which will facilitate:
 - congestion relief;
 - a safety net for those without access to autos;
 - reduced negative environmental externalities, such as air pollution;
and
 - enhanced regional economic competitiveness.
- increased satisfaction of current riders, achieved by adjusting service to thresholds of satisfaction;
- increased cost-effectiveness (efficiency) of service delivery, achieved by decreasing the cost and/or increasing the revenue per rider;
- enhanced social impacts, achieved by creating some social goods for broad or narrow population groups;
- improved political equity, achieved by distributing services and allocating revenues more directly in proportion to needs; and thus

- broader political support for the RTA and its programs, helping to ensure RTA's survival.

In the next section we outline specific definitions of marketing, market research, and strategic market research to build a basis for designing a strategic market research program.

B. Market Research Definitional Framework

Marketing entails the following three broad tasks:

- Designing and delivering services which people want to use and will use;
- Communicating the availability and characteristics of those services to people; and
- Persuading them to use them.

While the historical tendency has been to exclude service design and delivery from the definition of marketing, the modern concept holds that tuning service to the needs of the market is essential for retaining and increasing for success. To be a truly market driven organization, this must be the key aspect of marketing.

Market research is a fundamental component of successful marketing effort.

Market research includes:

- Empirically-based studies of the factors and forces affecting the use of services by various groups [segments] in the market. Market behavior

can usually be understood in terms of characteristics of people, their context or situation, and the attributes of services offered.

- Development and application of methods to predict the market response to proposed services and service features.
- Laboratory and field testing of service concepts prior to large-scale implementation.

Strategic market research is an innovative adaptation of market research intended to support strategic planning and decision making. Strategic market research is:

- Market research which supports decisions about the *long-term, large-scale* evolution of the transit system, including such decisions as:
 - budget allocation and financial planning;
 - major and systematic capital investments, reinvestment, and divestitures;
 - program initiation and termination;
 - overall strategies for delivering services [e.g., privatization].
- Strategic market research is:
 - ongoing [continuing], not merely opportunistic;
 - regionally-oriented; focusing on markets and issues of concern to all service boards;

- focused on the long-range future [5 years or more];
- focused on understanding causal processes, to increase predictability of markets;
- action-oriented to provide real decision support, not merely abstract research results.

C. Strategic Market Research: The Core of Strategic Management

While RTA has set the standard for linking strategic planning to its decision making, thus far strategic planning at RTA has primarily been financially focused. Yet, market success must remain the key measure of effectiveness for a transit service. Therefore, RTA has a need for market information at the strategic level. Market research can help determine what transportation services people need, want, and will actually use, and at what prices. Precisely this kind of information is needed to support RTA decision-making.

Because RTA is responsible for policy and long-term resource development and allocation, it must be sensitive to market trends on a macro scale, so as to avoid moving down undesirable paths and meeting with unpleasant surprises. Indeed, RTA must be proactive, anticipating and perhaps even influencing these market trends.

Specifically, RTA policy makers need direct and timely market information, including an understanding of long-term market trends and the dynamics which

influence them. Strategic market research is not merely an ancillary, off-line function. To be effective, it must play a key role in the strategic planning agenda.

Thus, strategic market research should carry equal standing with operations planning and management and finance efforts, since it should and does shape ridership, operations, revenue generation, and political acceptance of services and the agencies which deliver them. And since there is evidence that the answers to key market questions are *changing*, strategic market research must concentrate on *monitoring* and ultimately, *anticipating* future patterns and trends.

Thus, strategic market research must be integrated into *RTA's strategic* planning activities. This is not a tactical activity, which is the province of the service boards.

D. Potential Benefits of Strategic Market Research:

Real opportunities exist for RTA if it institutes an expanded program of strategic market research. New market segments and new types of service delivery options are likely to emerge from sustained research of this type. Such opportunities may include:

- Early trend identification across service boards;
- Establishment of more rational bases for resource allocation;
- Improved cost-effectiveness of investments;

- Better integration of efforts across service boards and with political actors, employers, developers, and private carriers to assure mutuality and amplification of actions, provide incentives, and share risks;
- Initiation and spin-off of services and actions through privatization and localization of services, which may generate on-going social benefits without requiring long-term RTA service commitments to specific markets; and
- Customized/individualized services innovated in selected markets.

There are at least two major types of costs arising from a failure to engage in strategic market research.

Reactive costs include failures to understand market *reaction* to transit system decisions. These will be measured in terms of low utilization of services and market failures of new, perhaps major, investments.

Proactive costs include the problems of failing to anticipate *autonomous* changes in market segments, which require adaptations by RTA and its service boards. These will be felt in the need to "catch up" with market trends, potentially at considerably higher costs than if an early warning system were in place.

Together, these costs include the following outcomes:

- Low utilization of services;
- Erosion of markets over time;

- Failure of new investments;
- Financial pressures to withdraw unsuccessful services, and community demands to retain them despite market failures;
- Amplification of social divisions [city vs. suburbs; rich vs. poor; ethnic; racial];
- Wasted resources;
- Erosion of political support.

The next section of this report identifies the kinds of information RTA should seek to gain from a strategic market research program.

4. WHAT SHOULD RTA LEARN FROM STRATEGIC MARKET RESEARCH?

A successful strategic market research program should provide RTA with decision support information in four inter-related areas: travel market characteristics, transportation service characteristics, principal factors and relationships influencing transit markets, and, putting all three of these together, a solid capability to anticipate market trends and responses to service chances.

Among the important *characteristics of the travel market* which can be better understood through strategic market research are:

- Overall descriptions of markets for public transit and competing modes (auto and private carriers), including not only market size, but detailed

information on the social, economic, attitudinal and geographic characteristics of the various markets. Knowing the number of riders is not enough to provide a strong basis for strategic decision making. We need to understand who rides, who does not, and why.

- Major temporal trends in travel markets, in terms of shifting spatial patterns (growth and decline of markets in different parts of the region); socio-economic attributes of travelers (how characteristics of riders of various services change over time and space); and trip characteristics (shifts in the purpose and timing of trips).

Strategic market research can fulfill a need to understand the multi-dimensional nature of RTA's travel markets, rather than presenting them as "flat" images of aggregate ridership trends over time. People make travel decisions in response to a wide variety of individual and household factors. We must see the market as a result of such decision making, which requires that we examine a broad variety of market characteristics.

Strategic market research can also illuminate important *transportation service characteristics*, which must be considered if we are to understand why travelers use (or do not use) transit the way they do. While we know a great deal about the characteristics of transit services offered in the marketplace, to understand and anticipate traveler responses, we also need to know about service characteristics of the main competing mode, the automobile.

For example, in planning express bus services in suburban settings, where automobile availability tends to be quite high, we need to understand the relative competitive position of transit *vis a vis* the automobile. Hence, we need to know something about auto ownership and use, and particularly about the performance of the auto-highway system, e.g., travel times, parking and other costs. While such information may exist at other agencies (e.g., CATS, NIPC, IDOT Traffic Systems Center), it is not apparent that it is readily accessible -- or accessed -- by RTA, nor is it evident that timely information about auto service actually exists in usable form.

Furthermore, even for transit, we do not have comprehensive and timely information on objective service characteristics known to be important to travelers. In particular, with the important exception of Metra, we do not have good data on primary service quality attributes, such as travel times (as opposed to scheduled times), reliability, crowding, safety and security, and cleanliness and comfort.

Instead, in the planning and policy process we tend to see services from the operator's, rather than the traveler's, perspective. We know about network structure, capacity, hours of service, and planned or intended travel times, etc. Yet we often do not know what services are actually presented to the marketplace on a daily basis.

It is also important to measure and monitor perceptions of service attributes, and attitudes of riders and non-riders toward transit services. The objective service

measures defined above are important, but we must also evaluate system performance from the traveler's perspective, for it is these perceptions which ultimately determine behavior. The special-purpose service board market research studies cited earlier demonstrate both the feasibility of collecting such data and their usefulness in service planning and decision making. Such efforts need to be continued and expanded.

Strategic market research should also capture the other *major causal factors* which determine markets, as defined in Figure 1. These include measures and projections of the macroeconomy and broad trends in household characteristics, data available from other sources.

We must also monitor and understand patterns of institutional behavior, including actions by developers, businesses, and local governments. While we have anecdotal information on such behaviors, for the most part we learn about them through their results, so we may fail to understand both causality and shifting trends. This reduces RTA's ability to influence such behaviors for the benefit of the transit system of the region. Thus, we think that special studies of decision making in private sector markets and other public agencies are warranted under the strategic market research program.

Ultimately, all of these types of information can be integrated, informally through experience and judgement, and formally through models, to enhance our capability to anticipate the impacts of major policies and actions proposed by RTA

and the service boards. A reliable and reasonably precise *ability to predict* both service needs and market responses to service and price changes is an important element of the information base which RTA needs to make successful choices.

Knowledge of market characteristics, service characteristics, and other causal factors is necessary to develop such a predictive capability. Some of this information can be assembled from data collected by others; some new, primary data collection and analysis procedures will be required. Additional, ongoing efforts will be needed to develop, organize, and maintain the timeliness of such forecasting tools and procedures.

An efficient ability to anticipate market trends and responses is needed for all levels of planning, and for all time horizons. It can support choices about budget allocation, financial planning, major investments and divestitures, new programs, and overall strategy - whom to serve and the most appropriate roles of other entities in the transportation marketplace.

A forecasting capability is needed at the level of the RTA because (1) RTA decision support needs are different from those of the service boards and (2) in the process of making major decisions affecting the future of the region, there is a real and important value in "ownership" of data and methods to assure that the information produced is unbiased.

In the next section of this report we present a specific design for a strategic market research program.

5. DESIGN FOR A STRATEGIC TRANSIT MARKET RESEARCH PROGRAM

The proposed strategic market research program is both continuous and progressive. It is continuous in the sense that the process is ongoing, with the completion of each cycle of market research and decision making leading to a successive cycle. It is progressive in the sense that it is designed to move forward as new analyses are conducted, new ideas are conceived and tested, the management information base is expanded, and new implementation decisions are made.

A. Structure of a Strategic Transit Market Research Program

We adopt the symbol of the wheel to represent the continuous and progressive nature of the proposed program (Figure 2). The four major components of the program are represented by rectangular blocks around the perimeter of the wheel. Activities in each of these components interact with the market, which is placed at the hub of the wheel to indicate that it is the focus of the market research program and all its components. The ovals, also on the perimeter of the wheel, represent outputs of the various components of the program.

The strategic market research program is an ongoing sequence of activities which does not have a beginning or an end. The completion of each component proceeds naturally to the initiation of the next component in the program. Further, different component activities may take place simultaneously: research on different

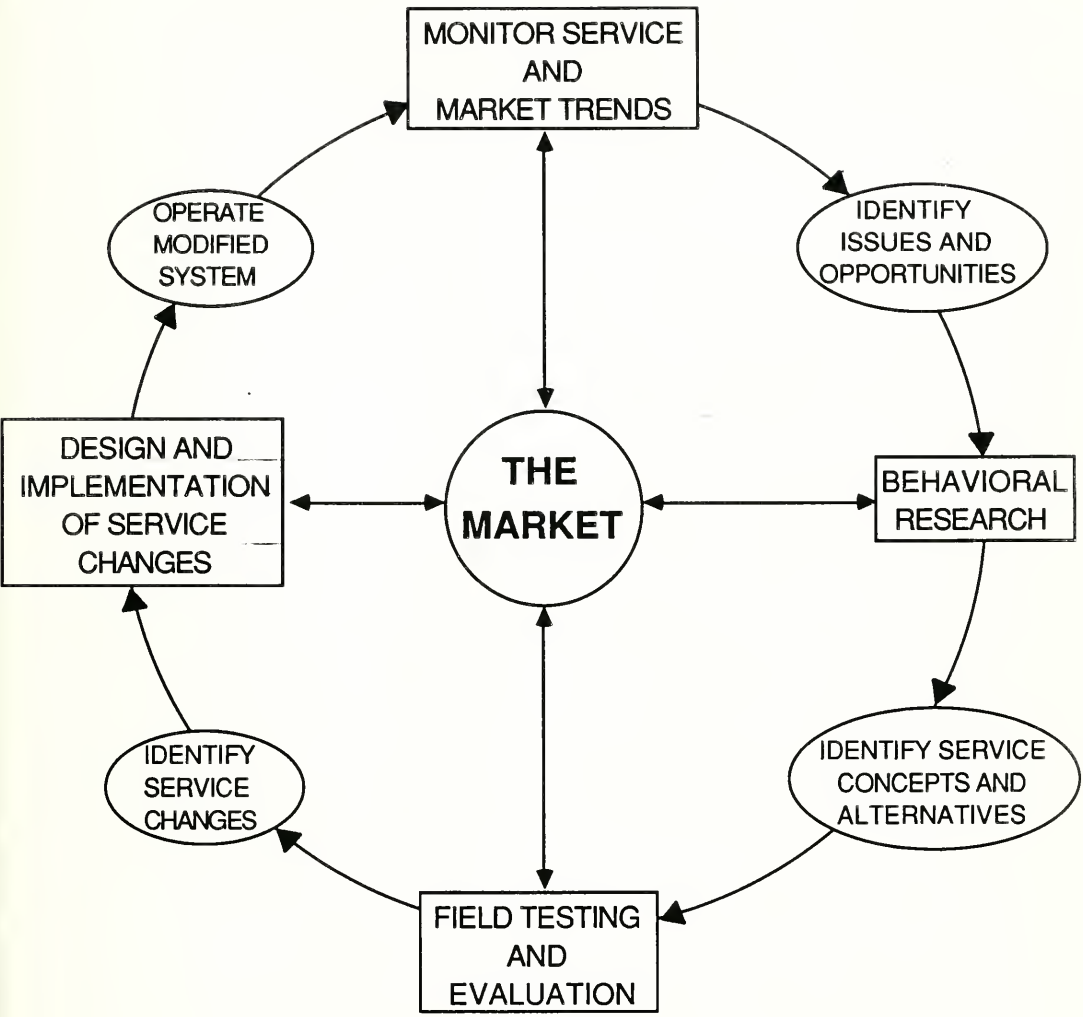


Figure 2

STRATEGIC MARKET RESEARCH PROGRAM

issues or markets may begin at different times and may progress through the cycle at different rates. Nonetheless, it may be desirable to schedule some of the components to occur on a specific time cycle which can be integrated with other aspects of the RTA's strategic planning process. For the purpose of description, we begin with the monitoring component, the component most likely to be performed on a fixed, periodic schedule.

Monitoring is designed to obtain and organize information about market characteristics in the region, about the travel services provided by the RTA through the service boards and by the private automobile and private carriers, and about the utilization of such services.

The monitoring function will provide information about what is happening in the region with respect to factors which influence the need for, provision of, and utilization of transportation services. These include information about population and economic activity, transit ridership and other travel, costs to the traveler, revenues to transit providers, and both objective and subjective measures of performance (Figure 3).

Initial monitoring will provide a base of information for assessment of public transit performance, identification of successes and failures in the market, and characterization of changes in the travel market. This information can be used to identify issues to which the RTA should develop a response, including identification of weak or growing markets. It can also be used to identify opportunities for

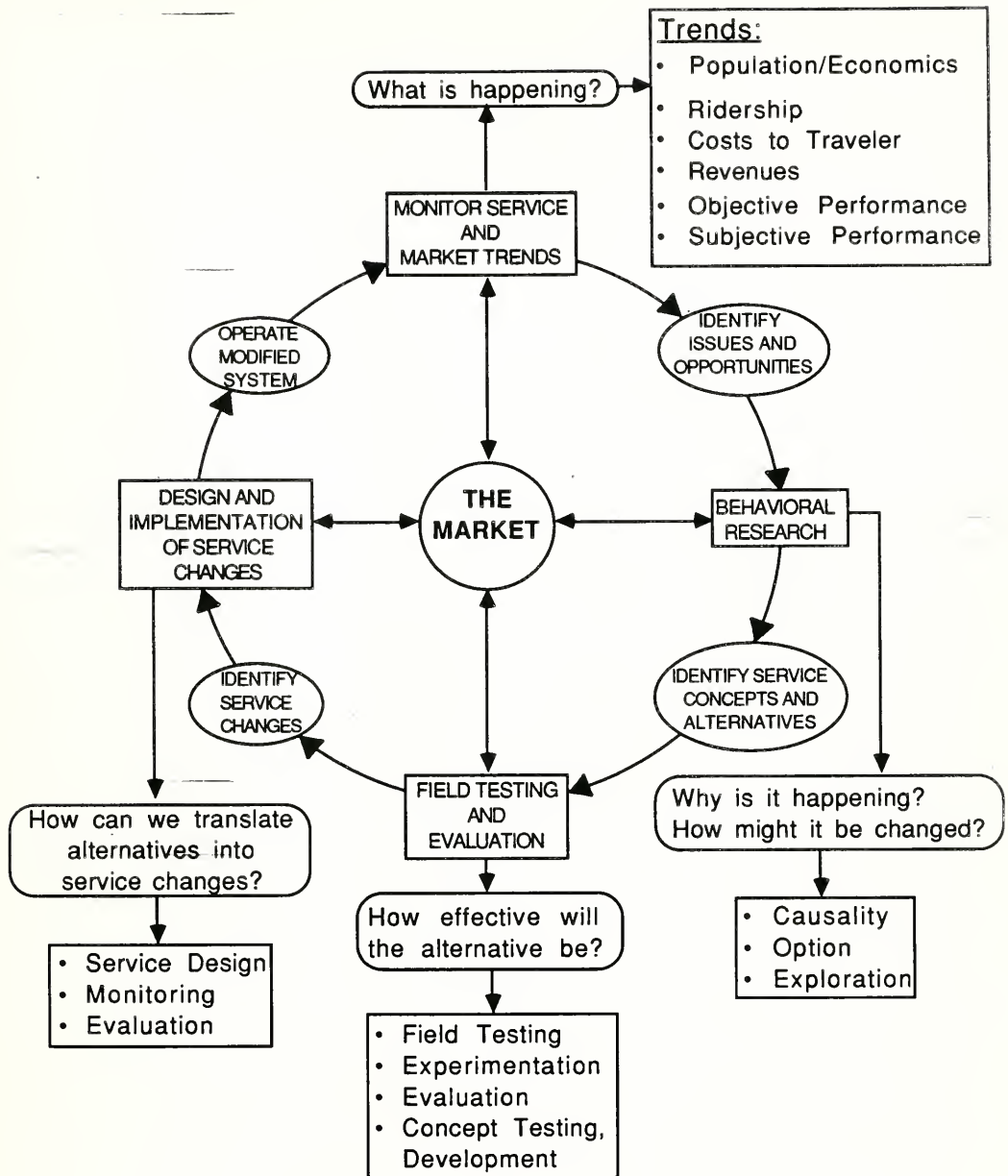


Figure 3

STRATEGIC MARKET RESEARCH PROGRAM

Expansion of the Concepts

provision of new or revised services. Periodic data collection and analysis will add the capability to identify trends which will enable the RTA to foresee market changes and to identify future issues and opportunities to which it may wish to respond or which it may attempt to redirect.

The second major market research component is *behavioral research* to determine the behaviors which underlie the observed travel patterns and transit usage. This research is designed to (1) explain why the observed travel patterns and transit usage occur and (2) identify actions which may be undertaken to provide better overall travel service and to increase transit usage. This component is directed toward understanding the causes of the observed behavior, identifying options to change that behavior, and exploring the effectiveness of such options. While behavioral research would not necessarily be focused on every issue or trend identified in the monitoring stage, it will be an important step for dealing with major problems and areas of concern. It is important for RTA to be prepared to engage in such studies when they are needed. The output of this behavioral research component will be an identification of promising concepts of service provision and/or other actions which might be adopted to increase transit ridership.

The results of the behavioral research component lead to the next component, which is *field testing and evaluation* of new service concepts and alternatives. Field testing and evaluation are used to obtain a more precise estimate of the expected market effectiveness of any course of action before a major commitment of

resources is undertaken. Full-scale field tests in a carefully designed experimental structure can be used to evaluate the effectiveness of proposed service changes. Other methods may also be used to test and develop new concepts, including in-depth individual or group interviews to obtain information that can be used to refine concept designs and/or to evaluate their likely effectiveness.

Field testing will produce proposals for service changes to be considered for general adoption by the RTA through its service boards. The fourth major component is the *implementation* of these service changes. This component is directed toward the translation of research-based findings and proposals into full-scale, operational programs. The critical issues are to develop a precise service design, obtain equipment as needed, train personnel, structure detailed operating plans, and develop a program for monitoring and evaluation of the proposed service changes. This component will, if successful, produce implementation designs which can be incorporated into systemwide transit services.

This component completes a full cycle of the strategic market research program, leading to another cycle with the already-established monitoring process focusing on the enhanced transportation system, including the new services developed in the previous cycle.

B. Methods of Strategic Transit Market Research

A variety of methods can be used for these different market research activities (Figure 4). The purpose of this section is to describe promising and proven methods for use in the four specific components of the proposed strategic market research program.

A large portion of the data collection for the monitoring component will be based on secondary sources. Three major types of data should be obtained on an ongoing basis. These are public data on population, socio-economic characteristics and development activities; transit and highway system data on service quality based on objective measures collected by the service boards, the Chicago Area Transportation Study, and other agencies; and travel pattern data which should be obtained from routinely-collected, detailed, by route and time, ridership data collected by the service boards.

Additional primary data should be collected through means specifically designed to supplement and clarify the data collected on an ongoing basis by the service boards and other agencies. These include periodic surveys, focus groups and other in-depth interviews with traveler groups and institutional representatives.

A reasonable program of periodic surveying might center on a biennial, region-wide random digit dialed telephone survey of 3,000 to 5,000 households, including both transit users and non-users. Data to be collected should include basic

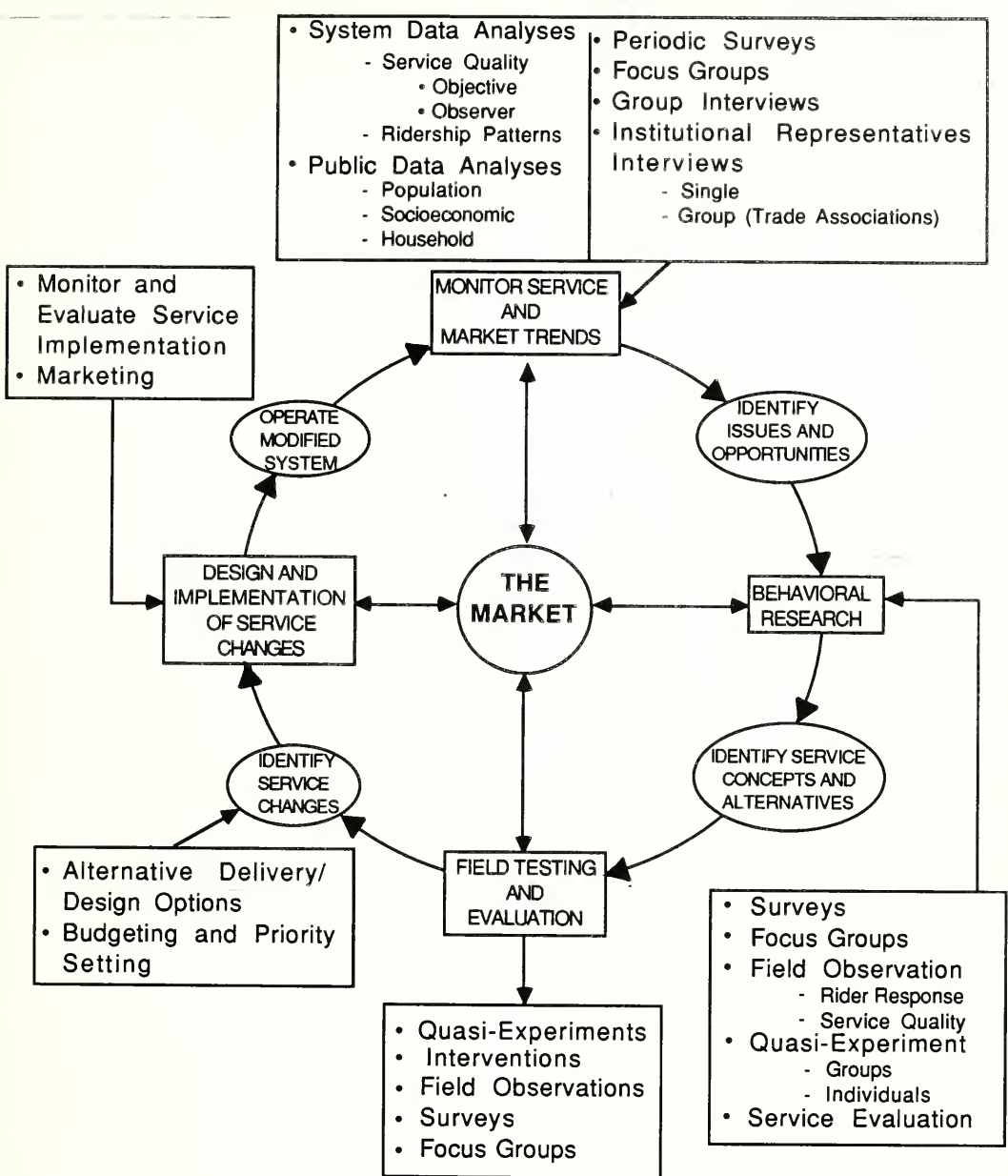


Figure 4

STRATEGIC MARKET RESEARCH PROGRAM Methods

demographics (household size, type, location, auto ownership, income, and employment); household location, structure and auto ownership two years prior to the survey (to capture dynamics); a travel diary for at least one household member for the previous weekday; transit and auto service quality ratings; and transit service awareness. Topics of special interest (emerging needs, reactions to specific services) could be covered in all interviews or a geographically or socio-economically screened subsample. The results of a sequence of such surveys could provide a strong basis for identification of trends and patterns of causality.

Traveler group interviews can provide qualitative information about how transit services are viewed in various markets and the factors which influence use or non-use of transit services. Interviews with institutional representatives, both government officials and developers, can identify patterns of proposed development, motivations to provide transit access and incentives likely to promote transit oriented development.

It would also be valuable to use observers to evaluate the quality of existing travel services on a systematic basis, providing RTA with insights which go beyond the objective data collected by service boards and other agencies.

The data collected in the monitoring stage can be organized to provide information about a variety of distinct and overlapping markets in the RTA area and to identify changes in important factors which may signal deterioration of service, weakening of an existing market, or opportunities to develop new markets.

The behavioral research component encompasses a wide range of possible activities which may be undertaken to investigate specific behavioral issues or to explain the underlying factors which lead to observed behavior of interest. This research is designed to find out why things have happened in the past and thus to indicate what is likely to happen in the future given different scenarios for development, population growth and distribution, economic factors, as well as changes in transit service.

Behavioral research includes both data collection and analysis. The data collection methods include individual surveys, group interviews, and field observations. The individual surveys and group interviews can focus on current behavior and the reasons for it, behavioral adaptations based on exposure to new or changed service alternatives, and projections of future behavior in response to hypothetical scenarios. These data should be collected at different points in time in order to identify patterns of changes in travel behavior and transit usage. Analyses can focus on evaluation of current service performance, identification of important service factors and exploration of new service concepts. Observational studies provide an objective assessment from an external, consumer-oriented, perspective and also provide information on consumer responses.

The field testing and evaluation component is designed to provide practical trials of options selected and proposed, based on both monitoring and behavioral research. This component should be carefully structured to obtain the most

generalizable results from each new experiment so that the maximum benefit is obtained across the RTA system. Programmatic testing of options provides a general structure for the design of innovative experiments, including the use of pre- and post-implementation collection of data on services delivered, service awareness and ratings, and service utilization. These data should be adequately detailed to identify both the strong and weak points of each service proposal tested. The analysis of this data should be directed toward finding the reasons for the observed behavior based on a clearly developed causal structure which can be generalized to other implementations in the region.

The experimental component of a strategic market research program should be structured broadly to include an active involvement of other major institutions, including local governments, developers, employers and private carriers. That is, experiments should include tests of innovative concepts of development location and designs, creative local government policies supporting shared-ride travel, and new ways of delivering services.

The implementation component of the market research activity is operationally oriented and should be primarily directed by the operational departments of the service boards. However, the RTA should be closely involved with this part of the process to assure that the actual field implementation maintains a marketing focus and that the service delivered closely follows the marketing

objectives established for it. Specifically, service design decisions must be equally sensitive to their marketing implications as to their cost implications.

The proposed strategic market research program should be closely integrated with all the other activities of the RTA and the service boards. The next section discusses the assignment of responsibilities for the different marketing research activities.

6. IMPLEMENTATION STRATEGY

Strategic market research should serve as RTA's window on the future of its markets. It is a process for future scanning which can prepare the Board and senior management to make the choices necessary to assure the success of RTA, public transit, and indeed the metropolitan area of Chicago.

Strategic market research is different from traditional market research in important ways which have been described in this report. These include its orientation toward the long-term issues, its pursuit of fundamental, causal relationships affecting travel markets, and its systematic consideration of innovative options for serving those markets. We expect that a strong strategic market research program might lead to radically different services in some markets than those existing today: it is not merely a way to fine-tune current service offerings, nor is it focused solely on RTA products. It must consider the full

diversity of transportation services, and how they might, or should evolve for the betterment of the region.

Engaging in an effective program of strategic market research will require the RTA to make a commitment to a new and useful set of activities, as well as to new ways of looking at markets and market opportunities. Strategic market research will not be effective if it is viewed as a modest, technical addition to ongoing activities of the RTA. We see it as a real change in philosophy.

Thus, it is advisable to make a clear distinction between current market planning and development functions within RTA and a new strategic marketing effort. While these two functions might initially reside in the same RTA administrative unit, their goals, functions and procedures are necessarily different.

Early in the implementation process, responsibility for strategic market research should be assigned as a full-time task to an individual experienced with the contemporary methods of market research, including data collection and analysis, interpretation, and decision support. This individual should have a high level of access to the senior staff and the Board. Ideally, this position might eventually be at the level of Department Head; yet the title is less important than the assurance that the manager of the strategic market research program has:

- the freedom to pursue new and innovative paths;
- access to sufficient resources to acquire, maintain, and interpret a timely data base;

- the administrative and professional credibility to command the attention of top RTA decision makers and senior professionals in the service boards; and
- a sufficiently strong relationship with the Board and senior managers to promote an ongoing dialogue about future markets for RTA.

RTA should not need to make major additions to the professional staff to implement a strategic market research program. It should be both feasible and efficient to contract for all of the data collection and much of the analysis work required, working with private firms and local universities. It will be important for the strategic market research manager to have the skills and experience needed to develop the program, define projects, evaluate technical proposals, and interpret the results of studies. Eventually RTA may wish to have one or two supporting professionals working with and for the program manager.

The service boards are already engaged in occasional market research studies, and substantial experience and expertise resides in these organizations. Thus, responsibilities for various steps of the strategic market research program should logically be shared between RTA and these service board professionals. An initial concept of the allocation of the responsibilities is shown in Figure 5.

RTA might formalize the role of the service boards and amplify its own staff capabilities in this area by establishing a steering committee for the program comprising one or two representatives from each of the service boards. These

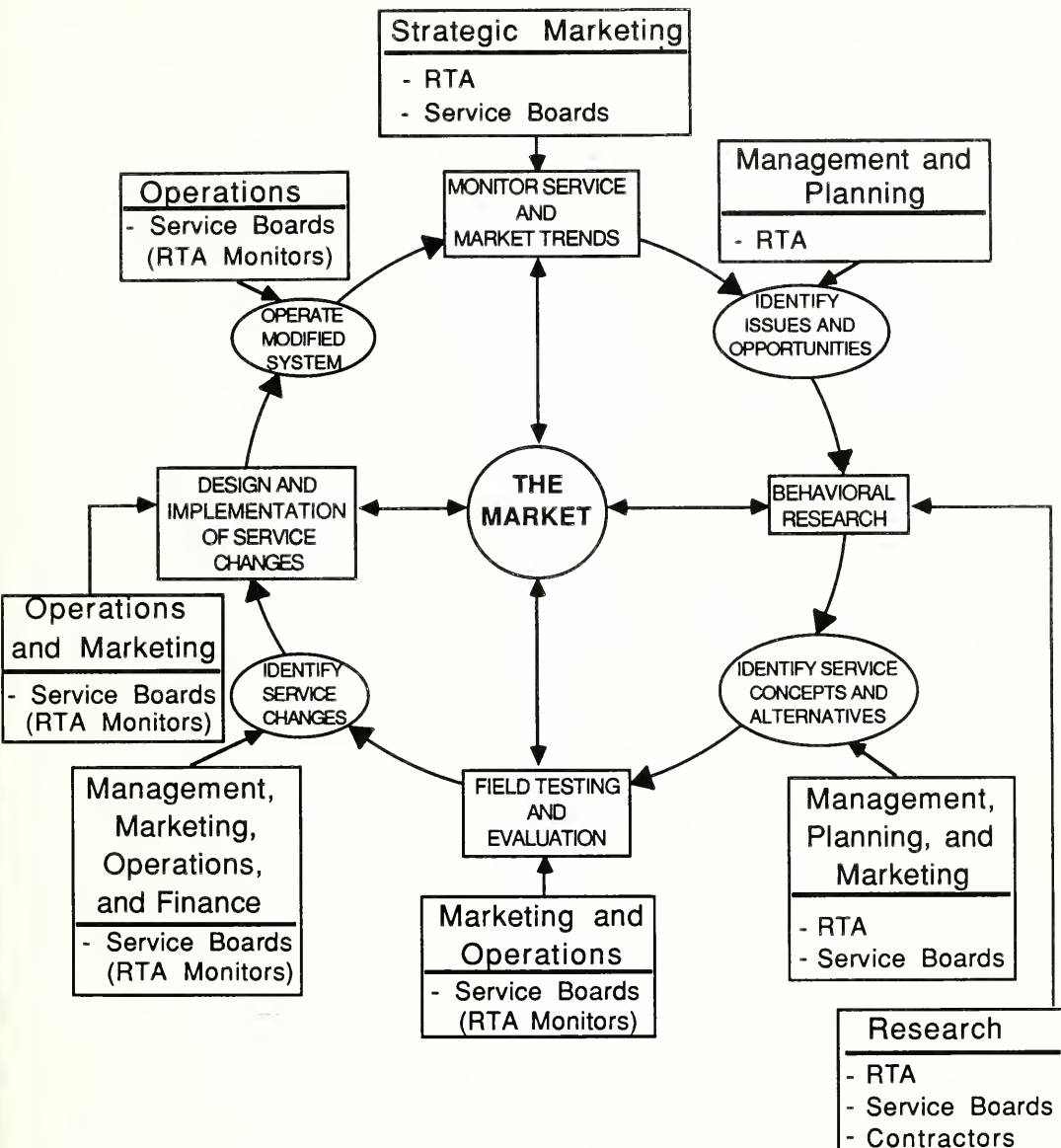


Figure 5

STRATEGIC MARKET RESEARCH PROGRAM Organizational Structure

representatives should be chosen from the service board professionals typically engaged in their own market research studies, thus facilitating the flow of information among the service boards and the RTA. The perspective of this steering committee might beneficially be broadened by including one or two outside representatives, perhaps from universities in the area.

The resource requirements for strategic market research depend on the extent to which these ideas are implemented, as well as the rate of implementation. A solid program can function at a cost of approximately one-tenth of 1 percent of annual transit operating subsidies in the region, perhaps \$500,000 per year, which would include data collection, analysis and reporting costs, but exclude operating costs of service experiments. During the first two or three years, expenditures should be less, on the order of \$200,000 to \$300,000 per year. This is a small price to pay for the significant improvement in decision support information which should be produced by this program.

Among the early steps to be accomplished in the strategic market research program are:

- Allocation of initial resources;
- Selection of a skilled program manager, and establishment of an initial organizational structure;
- Detailed specification of information needs, specific data items to be monitored, and data collection and analysis procedures to be utilized;

- Development of formal procedural guides for in-house studies, such as evaluation of field experiments conducted by the service boards under this program;
- Refinement of efficient contracting methods for data collection and analysis, perhaps include pre-qualification of bidders for initial studies.

7. CONCLUSION

Strategic market research is essential to the long-term success and survival of transit in the Chicago region, and of RTA and its service boards. Through this approach, it should be possible to make transit management proactive as well as more logically reactive. Stronger bases for decision making should be established, facilitating programmatic rather than opportunistic investment choices. This information may be particularly useful for making the difficult policy choices related to resource reallocation as the region evolves. As a result of this program, policy makers at the RTA should be better informed about market trends, their causes, and likely future issues, problems and opportunities. We think there is special value in the RTA having a stronger market prediction capability, one that it "owns" and understands, to ensure balanced decision making about service proposals originating with the service boards. This will provide a better basis for making the choices which will determine the future viability of our transit system, and of the region itself.

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